

**COOPERATIVE FUNDING PROGRAM**  
**WATER CONSERVATION PROJECT APPLICATION**

Applications are limited to 25 pages including figures, Reduction of Matching Funds (if applicable), the Acknowledgment letter, and the Cost Effectiveness Calculator. Application submittals must be uploaded at <http://www.sfwmd.gov/coopfunding> by **May 20, 2016 at 6:00 PM**. Prior to completing this Application, it is recommended you read the [CFP Guidelines](#). This application is for projects which will be implemented between October 1, 2016 and September 30, 2018.

**PROJECT SUMMARY**

<b>Project Name:</b> Automatic Line Flushing Devices	
<b>Applicant:</b> Ruby Mango Water Authority	
<b>Authorized Representative:</b> Jenny Jones	<b>Project Manager (PM) (if different):</b> N/A
<b>Address:</b> 100 Mango Drive	<b>PM Address:</b>
<b>City/Zip:</b> Ruby Mango 33333	<b>PM City/Zip:</b>
<b>Telephone:</b> 555-867-5309	<b>PM Telephone:</b>
<b>Email:</b> jjones@rmwa.gov	<b>PM Email:</b>
<b>Federal ID Number:</b> 59-33333333	
<b>Type of Organization:</b> Government	
<b>Total Project Cost (10/1/16-9/30/18):</b> \$120,000	<b>Local match:</b> \$60,000
<b>Requested Funding:</b> \$60,000	<b>Other Funding:</b> \$0
<b>SFWMD Planning Region:</b> Lower Kissimmee Basin	<b>County:</b> Okeechobee
<b>Estimated Water Savings (million gallons per year):</b> 10.9	<b>Cost Effectiveness (\$/kgals) (must use provided calculator):</b> \$1.40
<b>Are there other agencies contributing funding to this project?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, source(s): If yes, amount(s):	
<b>Does any SFWMD employee, Governing Board member, contractor, or other affiliate of the Applicant have a financial interest in this project, the property associated with this project or with any party that may profit financially from this project?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, list the parties and interests:	
<b>Is the project part of your institution/facility's conservation plan?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Is the Applicant a public utility, municipality, or governmental agency?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>This is a reimbursement program with the entire project scope expected to be completed within the funding period, regardless of amount awarded. There is no guarantee the Applicant will be awarded the amount requested. Are budgeted funds available to pay for the entire scope of the project?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Does the applicant understand that if for any reason, the project scope is not fulfilled to 100% completion as outlined in the statement of work, the funding amount will be reduced to match the original percentage of funding in the contract/purchase order based on the estimated project cost provided in the Application?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Does the applicant understand that funds are only for expenses incurred or obligated during the funding period?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Is the Applicant a REDI Community?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

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**PROJECT DETAILS**

**1. Please provide a brief synopsis of the Project. Indicate quantities of each hardware/technology item(s):**

Purchase and install 20 automatic line flushing devices (ALFDs)

**2. Provide a detailed background, description, and scope of work for the proposed project. Please include:**

- a. Objective
- b. Item(s) to be purchased/installed/distributed
- c. Number of such items (deliverables/methodology)
- d. Target group and its size (for irrigation projects, the acreage affected by the project must be specified)
- e. Location of this project

Ruby Mango Water Authority (RMWA) continues efforts to advance its Water Conservation Action Plan. The plan aims to reduce the county's current water consumption per capita by 15 percent by 2020. The objective is to save water while maintaining water quality by installing 20 automatic line flushing devices (ALFDs) on at-risk locations. These devices will allow us to maintain the necessary chlorine residual levels in the potable water supply in locations such as cul-de-sacs, dead-ends, and areas with limited homes. These devices efficiently maintain the quality of potable water while reducing the amount of water wasted in following a manual flushing routine using fire hydrants and save staff and operating costs. RMWA will purchase and install 20 automatic line flushing devices throughout the distribution system at locations determined by the Superintendent to be at risk for poor water quality. The devices will be programmed to operate on a regular basis for set time periods to minimize the amount of water used.

**3. If applicable, state any *environmental or community benefits of this Project other than reducing demand from a potable water source*. These other benefits could include water quality or habitat improvements, and/or benefiting a low-income, senior, or affordable housing community.**

Drinking water quality will be maintained at a consistently high level in the selected locations and will reduce the water wasted during flushing activities. RMWA will also save operating costs through reduced man-hours needed to manually open, tend, and close each hydrant individually. This project will save an estimated 2.6 million gallons per year of water.

**4. If applicable, state how this project showcases innovation using new technology or the method in which the Project is being implemented.**

**5. Is this a rebate or voucher program? Yes ☐ No ☒**

If yes:

- a. How many rebates or vouchers in total will be issued within the funding period<sup>1</sup>?
- b. What is the maximum number of rebates/vouchers issued to a single Participant?
- c. How many dwelling units/facilities will this program attempt to reach at a minimum during the funding period<sup>2, 3</sup>?
- d. List any additional types of fixtures or devices, such as, but not limited to, a showerhead or faucet aerator that a Participant may receive.

*Note:*

<sup>1</sup>Do not enter a range. The final reimbursement will be tied to this number.

<sup>2</sup>This questions assumes all Participants accept the maximum number of allowable rebates/vouchers.

<sup>3</sup>This is the figure you must use in the calculation associated with question 5.

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6. State the estimated water savings resulting from this Project and show how this estimate was calculated. Express estimated water savings in million gallons per year (MGY). Be as specific as your available data allows. Base your calculations on the minimum number of dwelling units affected (for residential projects) or devices installed (for non-residential projects). You must state any assumptions included in your calculations. If you answered question 5, you must use the minimum number of dwelling units or facilities entered into 5c.

Assumptions:

ALFD flushing velocities range from 100 to 200 gallons per minute (gpm). We will assume 150 gpm in our calculations.

Manual flushing:

30 minutes of flushing: 500 gpm x 30 min = 30,000 gallons x 20 = 300,000 gallons x 52 weeks = 15,600,000 gal/yr

Automatic flushing:

30 minutes of flushing: 150 gpm x 30 min = 4,500 gallons x 20 = 90,000 gallons x 52 weeks = 4,680,000 gal/yr

**TOTAL GALLONS SAVED:** 15,600,000 – 4,680,000 = 10,920,000 or 10.9 MGY.

7. The Cost Effectiveness calculation allows all project types to be compared to each other. The Cost Effectiveness calculation considers the cost to implement the project, amortized at 2.85%, and the benefits of the project over the anticipated service life of the hardware and/or technology. Cost Effectiveness is expressed in \$/kgals (or dollars per 1,000 gallons saved). A Cost Effectiveness calculator has been created for you. Which can be downloaded via this [LINK](#). If you have difficulty accessing the calculator, you may contact Stacey Adams at [sadams@sfwmd.gov](mailto:sadams@sfwmd.gov) or 561-682-2577 or Jim Harmon at [jharmon@sfwmd.gov](mailto:jharmon@sfwmd.gov) or 561-682-2777. An electronic copy of the Cost Effectiveness calculator is required to be included with the application submission.

\$3.46 (Excel sheet uploaded as required)

8. Please enter itemized cost information in the table below.

*Note: If some of the project work is being done "in-house" or "in-kind", please briefly describe.*

Project Hardware/ Technology Items	Quantity of Items or Rebates	Cost per Item or Rebate or Voucher	Installation Cost per Item	Total Cost for Each Line
ALFDs	20	\$2,500	\$2,500*	\$100,000
In-kind services	Number of Hours/ Items	Cost per Hour/ Item	Total Cost for Each Line	
Administration	100	\$20.00	\$20,000	
TOTAL (items above should equal the Total Project Cost)			\$120,000	
Source(s) of Other Funds (only applies to non-Applicant funding)		Funding Level		

\*Installation may be completed by in-house staff.

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**9. Identify the water source that will be conserved.**

- ☐ Potable Water from a utility at risk for saltwater intrusion based on elevated chloride levels in monitoring wells or within a Restricted Allocation Area (Section 3.2.1 of the Applicant's Handbook for Water Use Permit Applications).
- ☒ Potable Water from a utility not at risk for saltwater intrusion, or in a Restricted Allocation Area.
- ☐ Potable Water, but not sure if the area is with a Restriction Allocation Area or at risk of saltwater intrusion (Specify the provider utility )
- ☐ Surficial well water in the service area of a utility at risk for saltwater intrusion based on elevated chloride levels in monitoring wells.
- ☐ Surficial well water in the service area of a utility not at risk for saltwater intrusion.
- ☐ Surficial well water, but unsure if at risk of saltwater intrusion (Specify the water body )
- ☐ Water from a canal or stormwater catchment area (such as a man-made lake within a housing development).
- ☐ Reclaimed water.
- ☐ Other (Specify)

**10. If the Applicant has a Consumptive Use Permit, etc., please provide the Permit Number:**

**SUBMITTAL CHECKLIST**

- ☒ The Acknowledgment Form, on Applicant letterhead, has been completed and notarized and uploaded as a pdf.
- ☒ The Cost Effectiveness Calculator has been completed and uploaded separately as an Excel file?
- ☐ If applicable, has the Reduction of Matching Funds form been completed (on letterhead) and uploaded/attached as a pdf?

# Cooperative Funding Program

## Water Conservation

### Cost Effectiveness Calculator

Applicant Agency/City Name

Ruby Mango Water Authority

Project Title

Automatic Line Flushing Devices

Conservation Items	Total Project Cost	Annual Savings (MGY)	Service Life (in years)	Total Project Gals Saved per Day	Total Gallons saved over Service Life (MG)	Cost Effective (\$/kgal)
Autoline flush device	\$120,000	10.9	9	29,863	98.10	\$1.40
				-	-	\$0.00
				-	-	\$0.00
				-	-	\$0.00
				-	-	\$0.00
				-	-	\$0.00
				-	-	\$0.00
				-	-	\$0.00
(Weighted cost effectiveness for all Items)						\$1.40

Discount Rate

2.85%

(Default value)

#### Water Conservation Project Notes:

- 1) Use the Fixture (not applicable to Irrigation projects) savings worksheet FIRST.
- 2) Enter data only in **YELLOW** cells; **blue** cells are calculated for you.
- 3) Total Project Cost should match the amount listed in question 8 (itemized cost information table)
- 4) Gallons saved per year (in Million gallons per year) should match the amount listed in the Project Summary (page 1)
- 5) Administrative costs should be embedded into the cost of the largest item
- 6) For item service lives, see the table below
- 7) Enter this Cost Effectiveness value on the Project Summary (page 1) and question 7.

Item	Service life (Residential) in years	Service life (Commercial) in years
Faucet	15	15
Showerhead	8	8
Toilet	40	25
Urinal	-	25
Irrigation controller	5	5
Irrigation sprinkler heads	5	5
Rain/soil moisture sensor	5	5
Major appliances	11	20
Prerinse spray valve	-	5
Autoline flush device	-	9
Other:		

If your conservation item is not listed, enter it in the "Other" cell.

Provide documentation supporting the number of service years you enter.